

METHOD AND APPARATUS FOR CONTROLLING STEAM TURBINE INLET
FLOW TO LIMIT SHELL AND ROTOR THERMAL STRESS

ABSTRACT OF THE DISCLOSURE

[0025] In a method of controlling steam flow through a steam turbine having a turbine rotor, a maximum heat transfer rate is determined based on thermal stress calculations in the turbine rotor. A maximum steam flow rate can be calculated based on the maximum heat transfer rate. An actual steam flow rate through the steam turbine is determined, and a turbine inlet valve is controlled based on a difference between the actual steam flow rate and the maximum steam flow rate. In this manner, steam flow can be controlled to the steam turbine in such a way as to limit thermal stress to an acceptable level while minimizing start times and maximizing operability.